
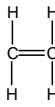
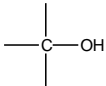
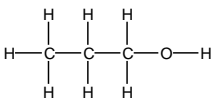
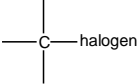
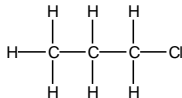

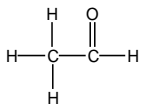

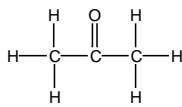
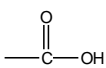
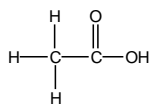
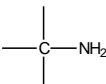
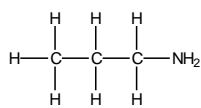
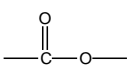
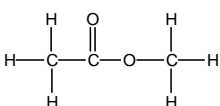


T10D01 – Simple Organic Nomenclature

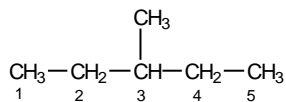
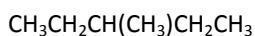
Name _____

homologous series	functional group	prefix / suffix (* = usual use)	example
alkenes		suffix -ene	
alcohols		suffix* -ol prefix hydroxy-	
haloalkanes		prefix chloro- bromo- iodo-	
aldehydes		suffix -al	
ketones		suffix* -one prefix oxo-	
carboxylic acids		suffix -oic acid	
amines		suffix* -amine prefix amino-	
esters		suffix -oate	

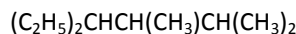
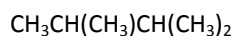
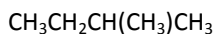
- The name is based around the name of the longest carbon chain (which contains the functional group):
1 C = meth, 2C = eth, 3C = prop, 4C = but, 5C = pent, 6C = hex, 7C = hept, 8C = oct, etc.
- The functional is indicated by a prefix or suffix. *e.g. chloroethane*
- The position of the functional group is given by a number, counting from the end that gives the functional group the lowest number (for aldehydes, carboxylic acids & nitriles, the functional group is position 1). *e.g. butanal.*
- Where there are two or more of the same groups, *di-*, *tri-* or *tetra* are used.
- If there is more than one functional group, numbers are separated by commas and the groups are listed in alphabetical order (ignoring *di*, *tri*, etc.). *e.g. 3-bromo-1-chlorobutane, 2,2-dibromo-1-chlorobutane.*
- Where there are two functional groups, both with suffixes, the preference for the one to have the suffix is
carboxylic acid > aldehyde > ketone > alcohol. *e.g. 2-hydroxypropanoic acid, 2-aminopropanoic acid.*

- The suffix for alkenes can go in front of other suffixes, *e.g.* 2-chlorobut-3-enal.
- If a number is not necessary (i.e. the group could only be in one place) then no number should be given.
- Numbers are separated by commas and word and numbers by dashes, *e.g.* 1-chloro-2,3-dimethylbutane.

Alkanes

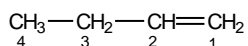
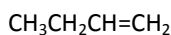


3-methylpentane

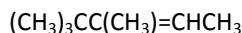
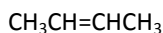
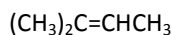


Alkenes

These have the ending **-ene**. If necessary the number of the position of the double bond added between the name stem and the -ene ending:

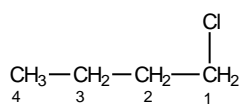
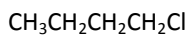


but-1-ene

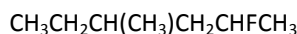
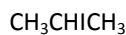
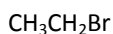


Haloalkanes

Regard the halogen as a substituent on the C chain and use the suffix **-fluoro**, **-chloro**, **-bromo**, or **-iodo**, and give the position number if necessary:

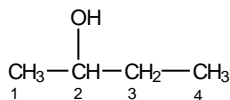
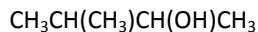
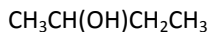
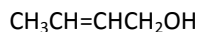


1-chlorobutane

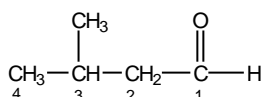
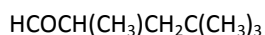
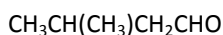
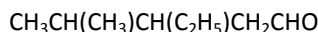
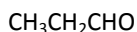


Alcohols

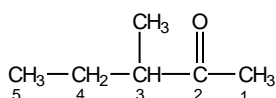
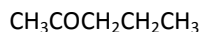
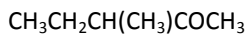
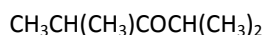
These have the ending **-ol** in place of the last -e, and if necessary the position number for the OH group is added between the name stem and the -ol (if there are two functional groups, it can begin with **hydroxy-**):

*butan-2-ol***Aldehydes**

These have the ending **-al** in place of the last -e, but no number is necessary for the aldehyde group as it must always be at the end of the chain:

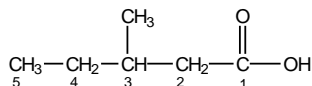
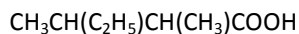
*3-methylbutanal***Ketones**

These have the ending **-one** in place of the last -e, with a position number if necessary between the stem and the -one suffix. The functional group can go at the beginning if there is another functional group as **oxo-**.

*3-methylpentan-2-one*

Carboxylic acids

These have the ending **-oic acid** in place of the last -e, but no number is necessary for the acid group as it must always be at the end of the chain:

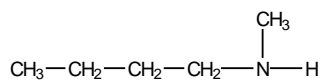
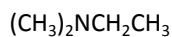
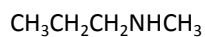


3-methylpentanoic acid

Amines

For the new programme (first exam 2009 and onward) you only need to identify the functional group.

These end in **-amine**, but it can go at the beginning if there is another functional group as **amino-**.



methylbutylamine

